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Skywatch
1207 Selma Street
Mobile, AL 36604
U.S.A.

Rod Mollise's

Skywatch



Time to Go DVD?!

Deepsky 2003 DVD Edition

Deepsky 2003 DVD Edition
\$79.99

\$45.00 for current users upgrading
from earlier versions
<http://deepsky2000.com>

I'd been predicting it for a while. Before long we'd see the first astronomy program go DVD. Well, that's finally come true with Deepsky 2003. Not much of a prediction, really. Obviously, the DVD medium with its ability to hold gigabytes of data, rather than mere megabytes like the CD, is a natural for astro programs with their huge catalogs. So it was really no surprise to me when Steve Tuma, developer of Deepsky 2002, one of the best planning/logging programs out there, told me he was interested in making the forthcoming "2003" version of his popular program available on DVD as an option. Sounded good to me! After quite a bit of beta testing, the first DVD-based astronomy program that I'm aware of was in its final release form and on my doorstep.

What did I think? The basic program has evolved and improved a great deal over the last 5 – 6 years, and now runs very well, very smoothly indeed. Like any complicated piece of software, there may still be a few bugs lurking, but not many. Steve has rigorously beta-tested this program prior to each new release,

and has been quite scrupulous about listening to his users' comments and taking their bug reports (via a Yahoo mailing list).

If you're interested in learning the basics of this program, let me refer you to my reviews of its earlier versions in past Skywatch issues (there's a link to these on the Deepsky 2000 web page). But to describe a very full-featured program in a few words, Deepsky 2003 provides an observing system for deep sky fans. It will allow you to search through databases of hundreds of thousands of objects (try 708,000) for targets to add to your lists, provide data on each object, print charts that will allow you to find your objects, guide a goto telescope to them, and log your observations when you're done.

The program media and installation? When you buy the DVD edition, what appears in your mailbox is two disks, one, a CD, containing the program and database files, and one a DVD, which at this point only holds images. Installation is foolproof this time through, with everything going smoothly and your computer not even asking for a "restart" when you're done.

But the subject here is the "new." The following are the highlights of what Steve has managed to stuff into DS2003.

-DVD edition includes images for 400,000 objects. When I'm planning an observing session, I like to be able to see photographs of the objects I'm after. It just helps a lot, letting me determine whether a galaxy, nebula, or cluster is worthy of inclusion in my list, aiding me in

locating a DSO, and helping me pick-out details once the object is found. Sure, you can download pictures from the Digitized Sky Survey. But that's time consuming, and what if you're in the field without an Internet connection? That's the beauty of the DVD. It took a while for it to sink-in, but it finally dawned on me that this DVD was all I'd probably ever need. I mean, 400,000 objects means you've not only got images of the entire NGC at your fingertips, it means that just about anything on your list or on your chart, even eensy-weensy PGC galaxies has an associated picture!

How well does this huge DVD image database

work? Incredibly well. I was a little concerned about retrieval times, but even my bargain basement DVD ROM drive brings 'em back in just seconds. Just click on the "image" field in a DSO's listing on your object spreadsheet and there you go. Alternatively, choose "Object Details" from the right-click menu, and you'll find the same image under an "image" tab in the Details window. Image quality? Very good. The most important objects are represented with large-scale images as in **Plate 1**. But even tiny PGCs are represented with decent-sized, legible photos as in **Plate 2**. The Image Processing window that displays the photos includes plenty of tools to adjust brightness and contrast, produce negative images, etc. Don't like the way a retrieved image looks, though? Too small? Too grainy? While most are very good, you may occasionally be able to retrieve a better-looking, more

"legible" picture yourself from the Digitized Sky Survey. If you've got an Internet connection, all it takes is a click of a button in the Image Browser tab from the main spreadsheet display to download a "fresh" image.

-Pocket Deepsky is included on the

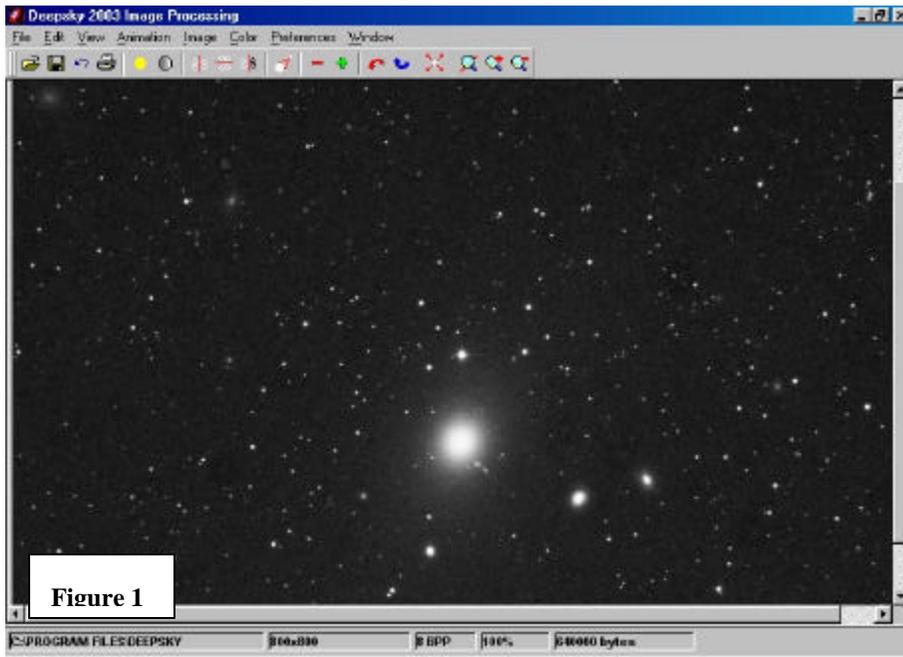


Figure 1

program CD. I'm a Palm person, myself, so I haven't been able to test the Deepsky Pocket PC version that's included on the CD, but I've been told by the PPC gang that it's very nice, allowing you to download objects from the desktop program and into your handheld. This was formerly an extra-cost option, but it's now included on the program CD.

-Several new catalogs have been added, including, most notably, the SAC Double Star Catalog.

-The Object Details window is much improved, and now includes separate tabs for displaying an object's image and a chart, rather than trying to cram everything into one window as on early versions.

-The program still interfaces with Patrick Chevalley's Cartes du Ciel, but it now also features integration with Patrick's new program, Virtual

Moon Atlas. Don't ask me why a Lunar observer would be roaming around in DS2003, but if you are and get the yen to look at detailed Lunar features, you can.

This is just a very small sampling of what's new in Deepsky 2003, and doesn't even begin to address the improvements

Steve has made, both to the program itself, as in fixing problems, and in improving the databases.

Features, new and improved, are good. But am I basically happy with this program as a whole? Yes, I am. No, it's not perfect—which astronomy program is? But my criticisms are getting fewer and fewer all the time. At this

point, the weakest link is probably still the Star Charting module. This part of the program, done by Dean Williams, is mostly unchanged since the program's earliest days, and is a little awkward and certainly less user friendly and easy to use than its moniker, "Interactive Charts" would suggest. I'd like to see a major rework of this part of the program, including, most importantly, the ability to overlay those 400,000 pictures onto your charts. Of course, the program's tight integration with Cartes du Ciel means you don't *have* to use the built in charts. But it would be nice if they were just a little better. My impression is that the bugs and rough edges that remain—and there are a few --are in the charting area.

Actually, the main question facing many folks when it comes to deciding whether to try DS 2003

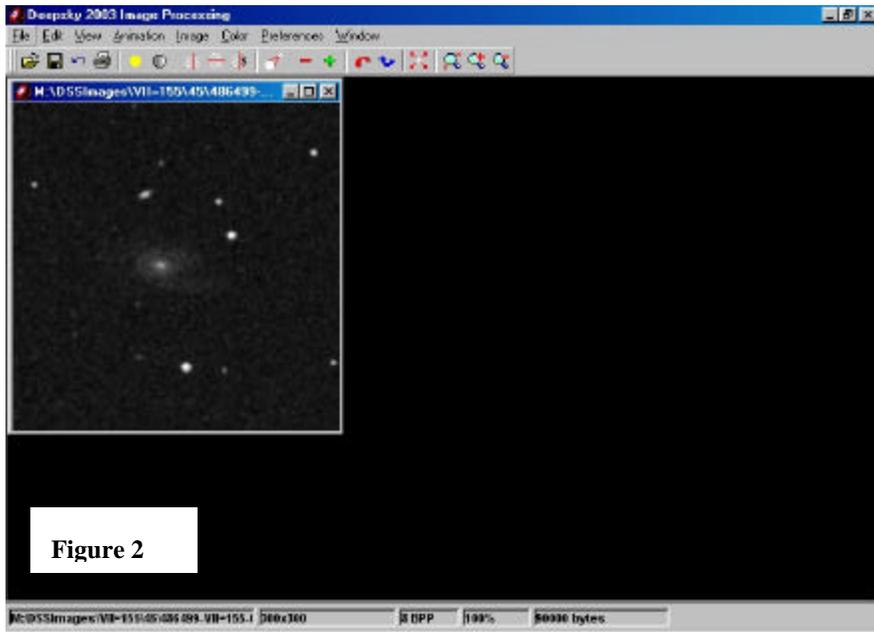


Figure 2

DVD Edition will be: "Do I buy a DVD drive just to use this astro program?" Many of us are using older computers, especially in observatory settings, for our astronomy computing needs, and if a machine is more than two years old, it probably didn't come with a DVD drive. You *could* get the 2003 program, on CD, as it's still available in that format. You even get some images, and can order additional CDs with more. That's OK, but it is nothing *like* the convenience of having the full library of 400,000 pix online all the time! If you don't already have a DVD ROM for your PC, my advice is *get one*. This is likely just the first in a long line of astro-programs that will demand a DVD ROM reader. If you're using a desktop, this is really a no-brainer, as you can buy a DVD drive for your desktop for 30 dollars or less on Ebay all day long. Believe me, when you start browsing the depths of space, seeing wonder after wonder flash onto your monitor screen as it's pulled off your DVD, you'll thank your old Uncle Rod for insisting you go DVD. Or more properly, you'll thank Steve Tuma for delivering such a nice program at such a reasonable price.

IN THE SHADOW OF THE STRAIGHT WALL

Chuck Taylor

"Standing there before the lunar explorer was an immense cliff, rising straight up for a thousand feet. Surely this was one of the most spectacular features he would ever see on the amazing moon."

Well... that's how it was described when I was growing up. It was the fictional account of a lunar explorer, looking at various features from ground-level viewpoint. Of course, it wasn't Rupes Recta, it was the Straight Wall. It was "Straight" because everyone could see it was straight. In the 1800's it was even known as "The Railway." And it was the "Wall," because the lighting and shadows made it obvious that this was the great wall of a cliff, rising vertically from the surface. At least it was obvious until someone realized that while a cliff would cast a shadow that was wide, at sunset, the cliff would appear as an incredibly narrow line of light (True, a cliff at the lunar limb would show as a line with width, but with this

geometry, if it were truly a cliff, it would appear much more narrow than it is). Instead, the white line has a width that can be measured. The angle of the sun and the length of the shadow tell us the height. The width of the bright line gives the width of the rise. The two together give the angle, which is disappointingly shallower than the 90 degree cliff we once thought. Rukl describes the height as varying from 240-300 meters with a width of 2.5 km. Going back to trigonometry, we find the opposite side of a triangle over the adjacent side equals the tangent of the angle. In this case, the opposite side is the rise of 300 meters. The adjacent side is the 2.5 km, giving a tangent of .12, which equals a 7 degree angle.

Of course, people still disagree about the slope. A class handout at MIT

http://web.mit.edu/12.409/www/handouts/handout5_sp2002.pdf

even describes it as a 40 degree slope. But most describe it as about 7 degrees, a gentle slope, which is not remarkable for how steep it is, but for how long and how straight it runs. Around it can be found Birt, Rima Birt and Thebit, which we will also look at. I'll give an introduction for each area with links to drawings and photos to help you get ready for observing.

INTRODUCTION: Rupes Recta, Birt, Birt A, Rima Birt, Domes, Thebit, Thebit A, Thebit L, Stag's Horn Mountains

Rupes Recta appears around the 8th day after the new moon. First appearance is a dark line, as the shadow stretches out, clearly showing which side is lower in elevation. As the sun continues to rise, you can see what appears to be the outline of a ruined crater. The eastern portion is in good shape. The eastern edge of Thebit lies on the east edge of the older crater. The western side of this older feature appears to have been eroded by the Mare lava. Rupes

Recta runs in the middle of this ruined crater, slightly displaced to the west. Robin Casaday has a photo which shows this clearly at <http://www.carmelcoast.com/media/Robin/Astro/RupesRecta.jpg>

It also shows what looks like another ghost crater between Thebit, and the mountains at the end of Rupes Recta. I was not able to find official or unofficial names for either of these features. To the west we see Birt and Rima Birt, with the possibility of seeing domes at the end of Rima Birt.

Rupes Recta, Stag's Horn Mountains

Within this area lies the lovely Rupes Recta, easily recognized as either a bright or dark line, depending on the illumination. As I mentioned, Rukl lists the rise as varying from 240- 300 meters with an apparent width of 2.5 km. If you see Rupes Recta as a long sword, the Stag's Horn Mountains become the hilt. (Stag's Horn is an unofficial name---I'm not sure how old it is and could not find an official name for the mountains---can someone else help out here?) Jane Houston Jones has a drawing at <http://www.whiteoaks.com/sketches/moon10.html> that shows this clearly, as well as an interesting analogy of the fault which can be found at <http://ephemeris.sjaa.net/0010/c.html>.

The Stag's Horn Mountains appear to form part of the ruined crater I mention that lies next to Thebit.

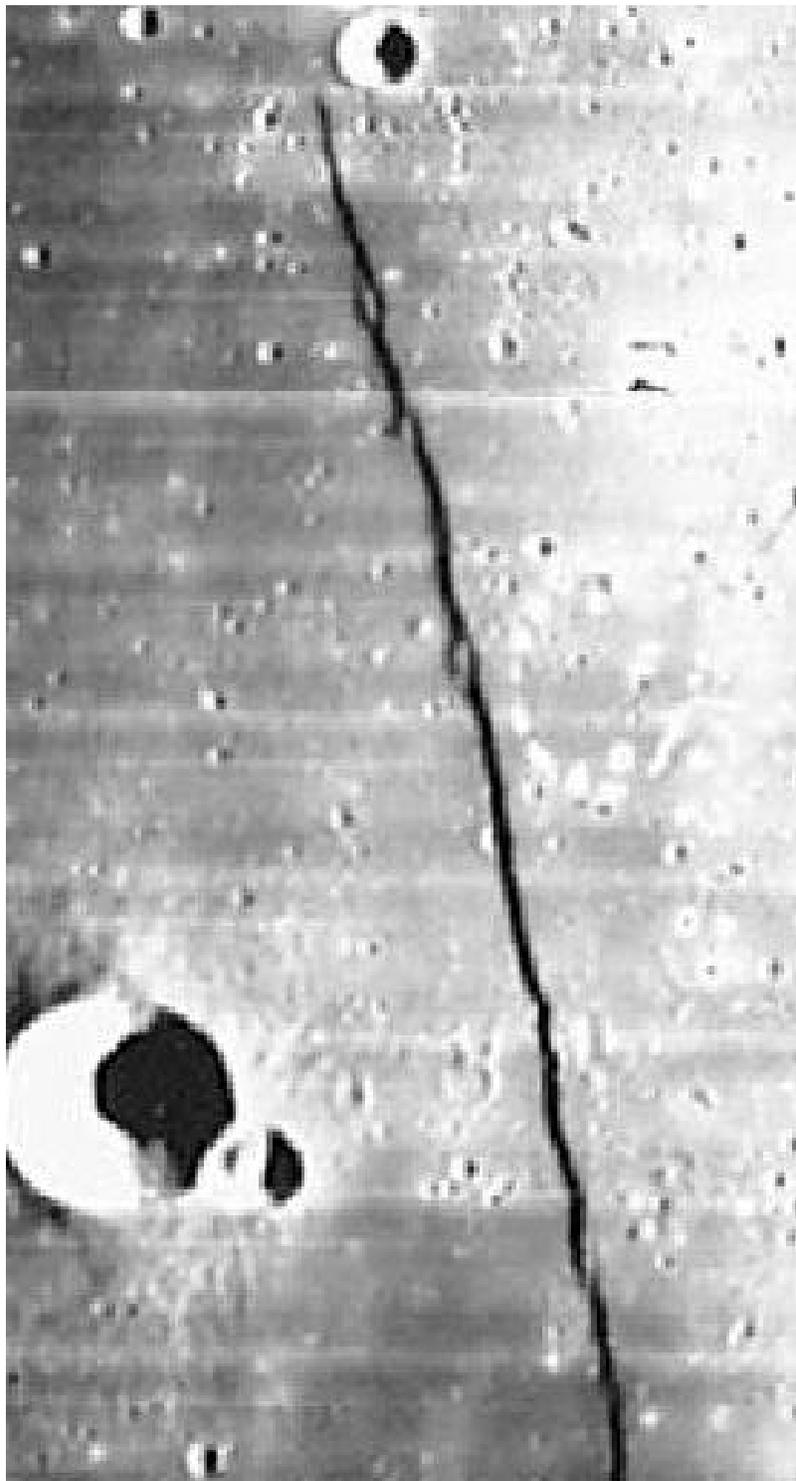
Craig Zerbe has very good photos at

<http://www.astroimaging.com/images/straight092000c.jpg> and

<http://www.astroimaging.com/images/straight050201b.jpg>,

which show Thebit, Rupes Recta, Birt and Rima Birt. Looking at these photos I can easily imagine I am flying high above the surface, looking down at a long cliff.

Thierry Legault has another great photo at http://perso.club-internet.fr/legault/wall_w.html



showing the same scene, but with the sun setting instead of rising. Comparing the photos shows how it changes from first to last light. Again, it is easy to imagine oneself flying above, and from this height, it does look like a cliff. But to me, it has always been a sword, with the mountains as the hilt. This particular

photo also catches Thebit, with Thebit A and Thebit L making a great trio. Craig's photo above also shows this trio with the light coming the other side.

Those wanting a challenge can measure the length. Since we know Birt is 17 km in diameter, how long

does Rupes Recta appear to you? Make your best guess without looking up the actual length and see how close you come. (I was long by 20%! So much for my being an expert!

Birt, Birt A, Rima Birt, Birt E, Birt F,

Birt measures in at 17 km with Rukl listing the depth as 1040 meters, making this a nice hole in the ground. If it were on earth, we would make it into a National Park, and stand amazed at its tremendous size. But on the moon we simply notice the "little" crater next to Rupes Recta!

Over the years various observers have seen it differently. The great British Lunar artist Harold Hill drew several bands running across the floor and up the walls, but noted the bands had not been mentioned in observations reports as late as the 1930's. However he also states they can be seen in a 3" refractor. Patrick Moore and others describe them as two "dusky" bands running to the west wall.

Opposite Birt A is Birt F, the terminus for Rima Birt, which runs from Birt E to Birt F. Harold Hill's drawing at <http://www.space.edu/moon/atlas/Nearside/Birt.html> shows Rima Birt and the dome at its starting point. This particular drawing catches the shadow of Birt reaching just to the edge of Rupes Recta. There are two smaller inset drawings, made at a later time, which show the shadow crossing Rupes Recta. These types of drawings have always amazed me, as they faithfully reproduce so much information, but represent only a brief moment as the illumination rapidly changed. What I am trying to do now is spend time drawing sketches of an area, focusing on the parts that do not change, and then picking one brief period to make quick sketches of the parts that do change rapidly. Later these are combined. How do other people on the list cope with this?

It appears the best lighting for the domes is just as the terminator sweeps over Rupes Recta at the local sunset. Rima Birt also seems to be more dependent on seeing and lighting than on aperture. What is the smallest scope anyone here has seen it with?

Thebit, Thebit A, Thebit L

Coming full circle, our tour brings us back to Thebit. This lovely (slightly out-of-round) crater has Thebit A on its edge, and Thebit A has Thebit L on its edge. As many have noted, "Fleas have lesser fleas upon their backs to bite them. And lesser fleas have smaller fleas and so on ad infinitum." In the same way, craters have lesser craters.... For some reason it makes me think of raindrops falling on a lake. A large drop has landed, making Thebit. From the splash, a center drop shoots up and lands back, but the wind has blown it over to the edge, and when it lands, it creates Thebit A. This also has a center splash upwards which the wind again blows, creating Thebit L. A quick snapshot catches Thebit expanding, Thebit A still at its deepest moment, and Thebit L, just as the final drop lands. Oh well, I have a strange imagination.

Cor Berrevoets has a fine drawing of the area at <http://aberrator.astronomy.net/moon/index.html> A little more than half way down his web page is the drawing of this area, showing Rima Birt, as well as the terraces on the walls of Thebit. Notice the differences in drawing styles with different lunar observers and find the style that works best for you.

Well, there's our first run through an area together. But before I quit, here is one last photo <http://www.moon-phases.com/moon-pictures/14.html> which sums up the whole area. You can easily see what appears to be an old ruined crater with Rupes Recta in the middle of it. Birt and Rima Birt show up well as Thebit. Happy Observing!

The Solar Session

One Pronto, Three Hours, HOW many kids???

Tom Trusock

ttrusock@hatchet.badaxe.k12.mi.us

It started off innocently enough. Never stopping to think I was only one guy and never having put on an observing session of this scale, I never imagined what it would lead to. Oh sure, among other things, I've observed with students, given presentations to the girl scouts, been a guest speaker for several different classes, and taught a summer astronomy class for interested youngsters. I've even run students through the Starlab (a portable planetarium) a couple of years in a row, but nothing prepared me for this many students.

One of our local schools (George E. Greene Elementary, K2) picked an astronomy related theme for reading month (Reading is out of this world!). Being a good friend of mine and knowing I'm into astronomy, the principal, Pete Batzer, explained the line up to me. Among other things, they planned to bring in a StarLab from the Midland Hall of Ideas – would I do it? Yes, I agreed, but that is another story.

During our conversation, I inquired if they were planning anything for Astronomy Day. Turns out, they weren't, as they had already done a ton of stuff earlier in the month. I suggested that I bring in my Pronto with a solar filter and we take a look at the sun. While we wouldn't actually do it on Astronomy Day, I figured we'd be close enough.

With spring weather the way it is in Michigan, I guessed a delay of several weeks before the big event. I also guessed that only one or two classes would be interested. In both respects I guessed wrong.

We scheduled the solar session for the first week of April. Due to the weather we had to wait another 10 days before a decent day occurred. During that time my Pronto lived in my car. Fortunately, my schedule was light for the day (extremely unusual lately), so I was able to run over there in the afternoon and put on a show.

We setup about noon - it was one of those rare spring Michigan days - fifty-eight degrees, and not a cloud in the sky. Perfect!

Since we really didn't know exactly when this was going to come off, it was a little hard to do a schedule. Pete (the principal) sent a signup sheet around quickly that morning, and found that *every single teacher* was willing to reschedule whatever they had planned that day so their kids could participate! Whew - talk about a high level of interest! I didn't stop to think just how many young children that was.

As each class came out, I ran through a five minute explanation - keeping it as short and simple as possible. We talked about solar observing safety and why you should never look at the sun without an adult and proper equipment around - their teachers had prepped them pretty well on that. We talked about how important it was that after they were done observing, they went back away from the scope to wait for the rest of their class. We talked about how they should choose an eye to view through, and how to look through the scope, and to try not to push the scope around on the mount.

Then we talked for a minute about what they could expect to see when they looked through the eyepiece. Most of them knew we were looking

at the sun but almost nobody was expecting spots on the sun. We talked about those for a minute and I asked them if they knew the "difficult scientific name" for those spots on the sun... "Hmmm what would the sun's spots be called?" "What would you call the Sun's Spots if you were a scientist?" That last one got some pretty good answers. There was a pretty big laugh when I revealed that the "difficult scientific name" for the sun's spots were - sunspots. I'd be willing to bet that they remembered that. I told them that as they came up to the scope, take a minute and see if you can count the number of sunspots on the sun. In a moment between classes, I undertook this myself, and determined there were on the order of 22 (three large ones and numerous smaller ones) visible that day. I was curious to see how many they would come up with.

Most of the kids were able to see the sun right off the bat. If a child stood there for a minute, I would ask "Do you see it?" wait... "Do you see a big round white ball?" wait... "Do you see a round ball with dark spots on it?" If the answer was no, then you would have to guide their head a little to help with proper eye placement. Interestingly enough, it is actually easier to do this at night while viewing the moon because at night you can see the light coming out of the eyepiece and hitting their face. This makes it easy to adjust. In the day, you have to look at where their eye is lined up with respect to the eyepiece, and it isn't quite so easy. One child I remember in particular. I had been chatting with a teacher for a second, and he had been at the scope and clearly wasn't moving away. I bent close and asked "Do you see the sun?" No response. "Do you see a bright ball?" this was followed by a "WHOAH" from the student. The teacher and I chuckled - "I guess he sees it."

Without exception, you could tell they were impressed. Some were

surprised and thought it looked like the moon - they asked where the spiky things were, and why it wasn't very bright? Excellent questions! It showed that they were thinking about what they expected to see and comparing it with what they actually saw. Remember these children are kindergartners, as well as first and second graders. These are pretty complex concepts. Most of the children gave me their sunspot counts after they left the scope. Almost all of them saw the bigger groupings, a few stayed longer at the scope than others, and it was obvious that they were counting. Most of them came away with a count closer to mine. One young lady spent a good two or three minutes at the eyepiece and came away with a count that actually matched mine! A natural observer there - no surprise that she was very reluctant to move away from the eyepiece.

As they moved off I had a chance to listen to them talk - they were so excited about what they had seen. That was the payoff right there.

Well, now you are probably wondering, just how many students did I solar observe with on that sunny afternoon? We ran over 300(!?) children and 15 adults through in a single afternoon. It was a true marathon. My only regret was that they couldn't have a little more time at the eyepiece. Maybe next time I can find another amateur astronomer in the area who can give me a hand. If you are from Michigan's thumb and would like to help out, *please* drop me an e-mail.

All in all, this was an experience that few of us (especially me) will forget for a long time. And I'll be duplicating it again this year as the children and teachers keep asking me to. If you haven't ever talked to your child's teacher or your local school and volunteered your services - what's stopping you? Believe me, it's worth it.

Tom is the Director of Technology for Bad Axe Public Schools and an avid amateur astronomer who resides in Michigan's thumb. He is already planning his daughters' first telescope, and would have bought it already if his wife weren't around to keep sanity in the house.

Observing the Craters of Mars

Rodger W. Gordon

53 Pages

Typographica Publishing

tpoastro@hotmail.com

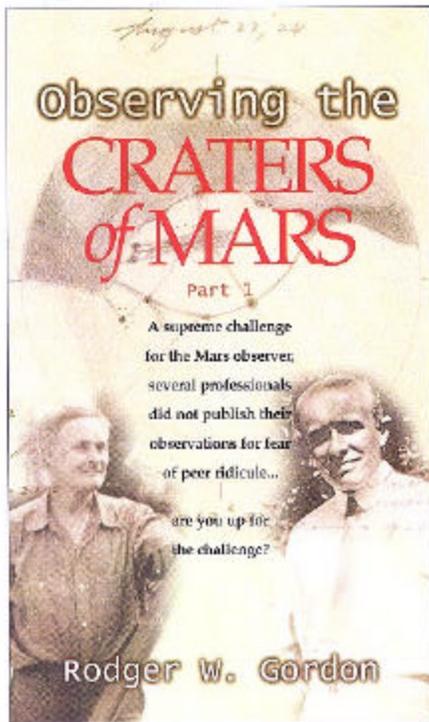
\$20.00

Rod Mollise

amateur astronomy is so 21st century these days. Not that that's a bad thing. The Internet means that Joe and Jane Amateur have access to the kind of data restricted to the pros just a few years ago: the Palomar Observatory Sky Survey, massive databases, and images hot off the CCDs of the big observatories. But there's one thing I miss from the old days (for me the "old days" of amateur astronomy is the 1960s), the papers and monographs that used to come out of the amateur ranks. These little books and pamphlets, often self-published, always charming and sometimes valuable and informative, have long since been replaced by the ubiquitous World-Wide-Web. Afterall, when you can "publish" yourself on a web page for the cost of nothing but your time, who wants to go foolin' around with getting something printed and bound?

A few people, thank goodness. There's still something to be said for a nicely done non-virtual hardcopy. Real books and magazines are portable, user friendly, and, darnit, I still like the look and feel of paper and ink. Yes, there are a few traditionalist left. There's *Amateur*

Astronomy Magazine down here in the South. And *The Practical Observer*, with more of a Northern slant, to name two of the non-virtual, non-professional amateur publications still around. This latter 'zine, Gordon Bond's TPO, is the parent of the book(let) in question, Rodger Gordon's *Observing the Craters of Mars*. In addition to publishing a very interesting magazine, Bond has seen fit to gift us with this very professionally written and printed little volume.



The purpose of *Craters* is simple, prove or disprove the premise that the Martian craters can and have been seen from Earthly ground-based telescopes. In his investigation of this question, Mr. Gordon draws upon his own considerable experience as a planetary observer, copious historical records, and the aid and advice of a group of folks that's a virtual who's who in the world of amateur planetary work: Tom Back, Tom Cave, Patrick Moore Don Parker and others. But this is Gordon's baby, and he's definitely at home in this company, having been

observing the Angry Red Planet since 1954. Believe me, it shows. His insights concerning Mars, observing and telescopes are impressive.

In addition to answering the question of whether we can see Martian craters from Earth or not (he comes down on the affirmative side), Gordon's *Craters* also serves as an introduction to the work of John Mellish, a turn of the century telescope maker and amateur/professional Mars observer who's work has been largely forgotten (though his reputation as a maker of fine instruments is still remembered by antique telescope fans). Mellish's apparent detection of craters during Mars' 1915 opposition, observations that appear to have been collaborated by renowned observer E.E. Barnard, is the jumping off point for this book. From there, Gordon takes us on a survey, not just of possible crater observations, but also a short history of the visual observation of Mars.

In addition to the past, we're readied for the future. The book provides us with some suggestions for hunting the elusive craters ourselves during this year's (2003) upcoming super-opposition. The book's cover blurb, in fact, reads, "A supreme challenge for the Mars observer, several professionals did not publish their observations for fear of peer ridicule...are you up for the challenge?"

The love and effort put into this small book are quite evident. It's attractively printed, and contains a number of lovely color illustrations. The many black and white pictures are largely clear and crisp, if at times a little grainy. There are a few typos, but nothing overly jarring, and the inevitable factual errors are documented on an errata list included with the book. But the important thing is the writing. Gordon hooked me from the start. His prose is both engaging and

enthusiastic without being over-the-top. The only thing I didn't like? At just over 50 pages, it was *too short*. I wanted more! Luckily, the cover is labeled with a prominent "Part 1." I'll be on the lookout for Part 2, for sure. But I hope Rodger Gordon will consider doing a more general book on the history of Martian observation by amateur astronomers. Should you buy *Craters*? At 20 bucks it's a steal in my opinion, at least it is if you love Mars as much as I do. And this year, who doesn't?



Enlightened by the Darkness

Diane K. Fisher

On the clearest of nights, I may see a dozen stars from my suburban backyard near Los Angeles. Unfortunately, my studies of space and astronomy have been confined to books and the pictures taken by others. Seldom have I experienced for myself a truly dark, clear, moonless sky.

One of those rare times was a summer camping trip in Bryce Canyon, Utah. I lay on my sleeping bag in an open area away from trees. I saw millions of stars (so it seemed) and the cloud of the Milky Way streaking across the sky. Nothing of planet Earth was in my view. It was then I glimpsed my true situation in the universe, a speck of dust clinging to a tiny stone hurtling through the darkness of a cold, infinite universe. I was awestruck by the beauty of the stars and the darkness-and terrified!

In the light of day and a more "down-to-Earth" state of mind, I wondered: With around 100 billion galaxies out there, why is it still so dark out there?

Until the 20th century, astronomers thought the universe was infinite.

They were perplexed though, because in an infinite universe, no matter where you look in the night sky, you should see a star. Stars should overlap each other and the sky should be blazing with light and hot as the sun. This problem became known as "Olber's Paradox."

Astronomers now realize that the universe is not infinite. A finite universe--that is, a universe of limited size--even one with trillions of stars--just wouldn't have enough stars to light up all of space.

Although a finite universe is enough to explain the darkness, the expansion of the universe also contributes. As light travels from a distant galaxy to us, the space through which the light is traveling is expanding. Therefore, the amount of energy reaching us dwindles all the time, thus causing the color of the radiation to be "redshifted." (The wavelength is stretched out due to cosmic expansion.) The more distant the galaxy, the more redshifted the light. The largest redshift astronomers have measured comes from radiation that was emitted when the Universe was only 300,000 years old. This radiation has taken over 12 billion years to reach us and although it began as infrared radiation, it is now seen as the microwave background radiation.

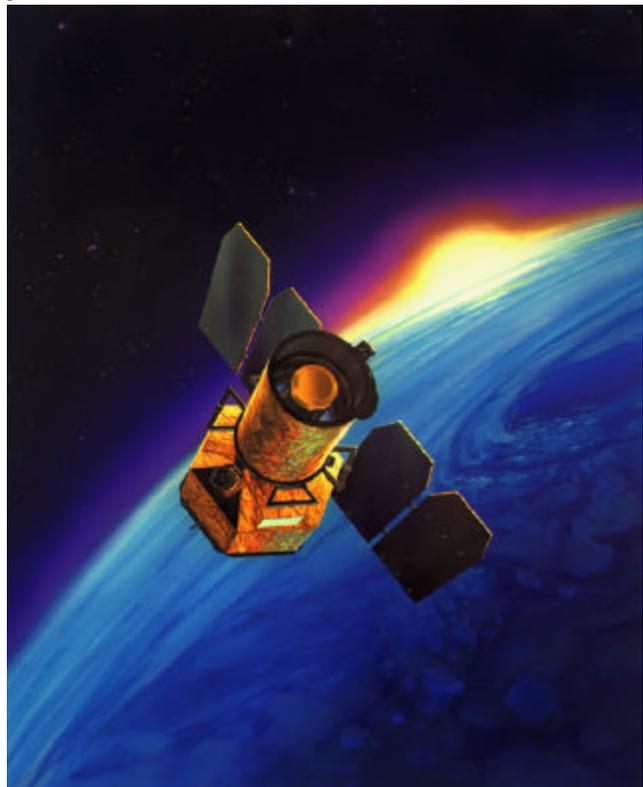
GALEX (Galaxy Evolution Explorer) is a NASA space telescope that will survey the universe, including galaxies with redshifts that indicate

their light has been traveling for up to 10 billion years (or 80% of the history of the universe). Read about GALEX at www.galex.caltech.edu/. For budding astronomers, print out The Space Place New Millennium Program calendar at spaceplace.nasa.gov/calendar.htm to identify great sky watching opportunities.

Diane K. Fisher is the developer and writer for The Space Place web site.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Image Caption:
The GALEX (Galaxy Evolution Explorer) mission will do a broad survey of galaxies in various stages of evolution and identify interesting objects for further study by the Hubble Space Telescope.



2003 SCT-Users Mailing List Imaging Contest

Kevin Dixon

In 2001, "Uncle" Rod Mollise had the innovative idea to propose an imaging competition for members of the SCT-Users Mailing List. The contest was quite a success and convinced Rod that it should be an annual activity for the SCT-Users group.

On April 1, 2003, the Third Annual Imaging Contest opened amid the promise of being the best contest yet. With an expanded list of individual categories and prize sponsorship by some of the finest vendors in the amateur astronomy field, expectations are high for a large number of magnificent image entries.

To qualify for the contest, a prospective entrant must be a member of the SCT-Users Mailing List and all images must be taken utilizing either a Schmidt Cassegrain, Maksutov Cassegrain, Maksutov Newtonian or Schmidt Newtonian Telescope or a Schmidt Camera.

Entries can be submitted for consideration in one of the following categories:

Best Solar System Object Astrophoto;

Best Solar System Object CCD Image;

Best Piggyback Astrophoto or CCD Image Guided with an SCT/MCT/MNT/SNT;

Best CCD Image by an Imager with One Year's (or less) experience;

Best Astrophoto by an astrophotographer with One Year's (or less) experience;

Best Prime Focus Deep Sky Astrophoto;

Best CCD Image;

Best Digital Camera Solar System Object; and

Best Digital Camera Deep Sky Object.

The entries are judged by the capable team of Dave Cole, Michael Cunningham and Don Wyman (and yours truly) who, combined, have more than a half-century of imaging/astrophotography experience. Together, the judges have the very difficult task of selecting the best images in the aforementioned categories.

It is also worth noting that first-year judge Dave Cole has designed a wonderful web page for the contest that features the contest rules, links to the websites of the contest sponsors and the entries submitted by the talented contestants. Also featured are last year's contest winners and a contest entry form.

Speaking of the contest sponsors, I would be remiss if I did not give proper recognition to the fine companies and individuals who have agreed to sponsor the contest by donating prizes to be awarded to the winners in each category.

This year's sponsors are:

- Anacortes Telescope and Wild Bird Astronomy Magazine**
- Astrotec**
- Scopetronix**
- Ron Wodaski, author of *The New CCD Astronomy***

I highly recommend doing business with these fine folks. They truly are the cream of the crop in the amateur astronomy field.

To date, we have received a significant number of wonderful entries but we need many, many more to make the contest an overwhelming success. I cordially invite you to visit the contest web page at www.nexstar11/contest/ to get all of the necessary contest information and to submit your very best images. Should you have any questions regarding the contest, please feel free to e-mail me at ksbtk@comcast.net.

So fellow CAT Lovers – LET'S GET IMAGING!!!

My Back Pages

"Crimson flames tied through my ears
Rollin' high and mighty traps
Pounced with fire on flaming roads
Using ideas as my maps
"We'll meet on edges, soon," said I
Proud 'neath heated brow.
Ah, but I was so much older then,
I'm younger than that now."



Ha, ha, ha! Their MTV show long-cancelled. Plans for their next feature film put on indefinite hold, and the boys, Beavis and Butthead, condemned to perpetual summer-school and detention meant that I was finally free of those nit-wits, right?

"Huh-huh, huh-huh, DILLWEED! We're like foreign exchange students or something, and we'll be spending the summer with you."

"Heh-heh, yeah-yeah, that's right. YOU SUCK!"

I felt the scream welling-up in my throat, but before I could give voice to it, I was handed that Mayo jar. The one kept on Funk and Wagnal's Porch for a fortnight. The hermetically sealed one. The one containing this issue's...

Rumours

What's new in amateur astronomy software? Well, little birdies are chirping about the supposed upcoming **v6.0** release of one of the biggies, Software Bisque's **The Sky**. 'Bout time, I'd say, as this one is starting to show its age. What will the new The Sky feature? More features, tighter integration with the other Bisque programs, and a nicer display, I'd guess. Rumor has had it that T-Point will be included in 6.0, but I'm told by folks who should know that this is NOT the case.

What else? I expected Main Sequence Software's Desktop Universe to make a *big* splash. Afterall, it's the first U.S. marketed program to use actual images for its sky display

rather than the computer plotted stars the Main Sequence web pages refer to as "cartoons" (!) (Greystel in the U.K. was the first program I know of to do this). It was even given the "Hot Product" treatment by Sky and 'Scope. Alas, it appears to have landed in the general amateur population with a resounding **thud**. For two reasons: price and performance. At 299 US\$, this is the most expensive planetarium I know of. That's 50 bucks more than the list price for the top level of The Sky (which can be found considerably discounted). That would be OK if it were obvious that DU could provide *capabilities* for the *working observer* not offered by The Sky (or Megastar, Guide, Skymap, etc.). But it's not clear to most of us what advantages real pictures give us except that they are *pretty*. And the program is a resource hog. While the stated requirements are 256mb RAM, 1gig of disk space and a 500Mhz processor, I'm being told by those who've tried it that it really needs considerably more. And that's a problem for many amateurs, whose "observatory PCs" tend to be last-generation. But there's no denying the program looks beautiful. If they could bring down the price by 100 smackers and get it working a little more snappily, I still think DU could catch on.

It's May. Where's the LX200 GPS 14? Last time, we were being told that it would ship in a "week or two." But it's over a month later. Where is it, Meade? I hope I'm wrong, but I'm startin' to get a really bad feelin' about this.

Celestron has released it's new "Advance" series, 7 OTAs on goto-equipped CG5 mounts. Some of these will be nice, no doubt. A C5, a C8, even an 8 inch Newt. But putting a 9.25 SCT or a 10" Newt on one of these mounts (clones of the Vixen GP) is expecting a lot. The advertisements C is

Skywatch

runnin' for these things look a little cluttered and confusing. All those OTA, drive and tripod options are enough to stress-out a possum!

I do expect these telescopes to turn out better than the Meade LXD55, whose poor quality control and execution (mount-wise) is getting this scope a very poor reputation. When the **Skywatch crew** was down in **Chiefland** for the Spring Picnic-Starparty, a 10" LXD55 SNT owner, curdled our blood with the story of how his OTA had literally **JUMPED** out of it's poorly designed dovetail-cradle and hit the ground one night. The OTAs are good. The mounts are nowhere. Period. And I had such high hopes for these interesting Autostar-equipped telescopes!

Guess you probably know by now, but Lumicon is back as a "wholly owned subsidiary" of Parks Optical. Hope they can keep things going, as everybody was really missing those filters and OAGs!

Bye-bye Zetas? With Nancy's May Date with Planet X approaching, many of the folks on sci.astro.amateur are hoping its non-appearance will mean we've seen the last of this conniving, silly dame. "Don't count on it," is the anonymous one's guess!

Til next time...

The Anonymous Astronomer

Think You've got clouds? Our friend Angie Snapped this video frame of a real monster in Hereford in the UK!

